

CLAIMS

What is claimed is:

1. A fluid-cooled induction heating cable, comprising:
a litz wire disposed within a hollow interior of the fluid-cooled induction heating cable;
a first and a second electrical connector, each electrical connector being electrically coupled to the litz wire; and
a first and a second fluid connector, each fluid connector being separate from each electrical connector and fluidically coupled to the hollow interior of the fluid-cooled induction heating cable,
wherein the fluid-cooled induction heating cable is flexible.
2. The fluid-cooled induction heating cable as recited in claim 1, wherein each electrical connector comprises a first plurality of electrical conductors adapted to engage a second plurality of electrical conductors in the corresponding electrical connector at an area of contact, further wherein the first and second plurality of electrical conductors are adapted to minimize electrical resistance at the area of contact due to skin effect.
3. The fluid-cooled induction heating cable as recited in claim 1, wherein each electrical connector comprises a flexible cover, the electrical cover being an electrical insulator.

4. The fluid-cooled induction heating cable as recited in claim 1, wherein each electrical connector is adapted to lockingly engage an electrical connector on an extension cable that is electrically coupleable to a power source.

5. The fluid-cooled induction heating cable as recited in claim 4, wherein each fluid connector is adapted to be fluidicly coupled to a jumper hose that is fluidicly coupleable to the extension cable.

6. The fluid-cooled induction heating cable as recited in claim 1, wherein each fluid connector is a quick-disconnect.

7. An induction heating cable, comprising:

- an electrical conductor disposed within a hollow interior of the induction heating cable;
- a first electrical connector electrically coupled to the electrical conductor, the first electrical connector being adapted for locking engagement with a second electrical connector electrically coupled to the power source; and
- a first quick-disconnect fluid connector fluidicly coupled to the hollow interior of the induction heating cable to enable cooling fluid to flow through the hollow interior of the induction heating cable,

wherein the induction heating cable is flexible to enable the induction heating cable to be wrapped around a pipe.

8. The induction heating cable as recited in claim 7, wherein the electrical conductor is a litz wire.

9. An extension for a fluid-cooled induction heating cable, comprising:
a litz wire disposed within a hollow interior of the extension;
a first electrical connector electrically coupled to the litz wire, the first electrical connector being adapted to matingly engage a second electrical connector on the fluid-cooled induction heating cable; and

a first fluid connector fluidically coupled to the hollow interior of the extension, the first fluid connector being adapted to be fluidically coupled to a second fluid connector on the fluid-cooled induction heating cable by a jumper hose.

10. An insulation blanket, comprising a mat of silica fiber insulation within a woven silica blanket, wherein the insulation blanket is adapted for use with a workpiece of a specific size and shape.

11. The insulation blanket as recited in claim 10, wherein the workpiece is a pipe having a first diameter, further wherein the insulation blanket is adapted to be fitted specifically to a pipe having the first diameter.

12. The insulation blanket as recited in claim 10, wherein the insulation blanket comprises a plurality of high temperature straps secured to the woven silica blanket to enable the insulation blanket to be secured around the pipe.

13. An induction heating device, comprising:
- a flexible tube;
 - a conductor disposed within the flexible tube;
 - a first electrical connector electrically coupled to a first end of the conductor; and
 - a first fluid connector disposed transverse to the first electrical connector and in fluid communication with the flexible tube.
14. The induction heating device as recited in claim 13, wherein the conductor comprises a litz wire.
15. The induction heating cable as recited in claim 13, wherein the first fluid connector is a quick-disconnect connector.
16. The induction heating device as recited in claim 13, comprising:
- a second electrical connector coupled to a second end of the conductor; and
 - a second fluid connector disposed transverse to the second electrical connector and in fluid communication with the flexible tube.
17. The induction heating device as recited in claim 16, wherein the first fluid connector is in fluid communication with a first end of the flexible tube and the second fluid connector is in fluid communication with a second end of the flexible tube.

18. The induction heating device as recited in claim 13, wherein the first electrical connector is adapted to lockingly engage a corresponding electrical connector.

19. The induction heating device as recited in claim 18, comprising a flexible shroud disposed over the first electrical connector.

20. The induction heating device as recited in claim 13, comprising:
a tee, wherein the flexible tube is coupled to a first leg of the tee, the first electrical connector is coupled to a second leg of the tee, and a fluid connector is coupled to a third leg of the tee.

21. An induction heating device, comprising:
a flexible tube;
a conductor disposed within the flexible tube;
an electrical connector disposed at a first end of the flexible tube and electrically coupled to a first end of the conductor; and
a fluid connector disposed adjacent to the electrical connector to enable cooling fluid to bypass the electrical connector and flow into the flexible tube.

22. The induction heating device as recited in claim 21, wherein the conductor comprises a litz wire.

23. The induction heating device as recited in claim 21, wherein the fluid connector is oriented transverse to the electrical connector.

24. The induction heating device as recited in claim 21, wherein the electrical connector is coupleable to a corresponding electrical connector and the fluid connector is coupleable to a fluid hose.